WHAT IS CLAIMED IS:

1. A method for drying a nonwoven fabric that has applied thereon a chemical finish composition comprising the steps of:

providing a nonwoven fabric comprising thermoplastic polymeric fibers and containing a chemical finish composition comprising a solvent and at least one chemical agent;

applying tension to the nonwoven fabric and transporting the fabric containing the chemical finish composition through a first drying zone wherein the solvent content of the nonwoven fabric is reduced to no less than about 2 weight percent, based on the dry weight of the nonwoven fabric, as the nonwoven fabric exits the first drying zone;

transferring the nonwoven fabric from the first drying zone to a second drying zone, wherein the tension applied to the nonwoven fabric in the second drying zone is less than the tension applied to the nonwoven fabric in the first drying zone;

heating the nonwoven fabric in the second drying zone to substantially completely remove the solvent from the nonwoven fabric; and

cooling the nonwoven fabric in a cooling zone.

2. The method according to claim 1 wherein the tension applied to the nonwoven fabric in the second drying zone is at least 50% less than the tension applied to the nonwoven fabric in the first drying zone.

3. The method according to claim 1 wherein the solvent content of the nonwoven fabric is reduced to between about 2 and 40 weight percent as the nonwoven fabric exits the first drying zone.

4. The method according to claim 1 wherein the nonwoven fabric exiting the first drying zone retains at least about 80 percent of the chemical agent contained therein when the nonwoven fabric entered the first drying zone.

5. The method according to claim 1 wherein the tension applied to the nonwoven fabric in any direction in the second drying zone is no greater than 52.5 N/m.

6. The method according to claim 1 wherein the solvent content of the nonwoven fabric is reduced in the first drying zone by impinging heated gas on at least one side of the nonwoven fabric.

7. The method according to claim 6 wherein heated gas is impinged on both sides of the nonwoven fabric in the first drying zone.

8. The method according to claim 7 wherein the impinging gas streams cause the nonwoven fabric to float in the first drying zone.

9. The method according to claim 1 wherein the tension is applied to the nonwoven fabric in the first drying zone by at least two serpentine rolls, and the nonwoven fabric exits the rolls prior to entering to the second drying zone.

10. The method according to claim 1 wherein the nonwoven fabric is transported through the second drying zone by pinning the nonwoven fabric to a moving porous surface with a vacuum source located on the side of the porous surface opposite the nonwoven fabric.

11. The method according to claim 10 further comprising passing a heated gas through the nonwoven fabric and the porous surface.

12. The method according to claim 11 wherein the nonwoven fabric is cooled in the cooling zone by passing cooling gas having a temperature lower than the heated gas through the nonwoven fabric while the nonwoven fabric remains pinned to the porous surface.

13. The method according to claim 1 wherein the chemical agent is heat-curable and the nonwoven fabric is heated in the second drying zone to a sufficient temperature for a sufficient time to cure the chemical agent.

14. The method according to claim 1 wherein the chemical agent is selected from the group consisting of fluorochemicals, flame retardants, wetting agents, binders, antistatic agents, and colorants.

15. The method according to claim 13 wherein the chemical agent is a fluorochemical.

16. The method according to claim 1 wherein the nonwoven fabric reaches a temperature in the second drying zone that is greater than about $(T_m - 40)°C$, where T_m is the melting or softening point of the polymeric fibers.

17. The method according to claim 16 wherein the cooling step comprises cooling the nonwoven fabric to a temperature that is less than about $(T_m - 30)°C$.

18. The method according to claim 16 further comprising collecting the cooled nonwoven fabric on a collecting means, wherein the tension on the nonwoven fabric is increased during collecting, relative to that in the second drying zone.

19. The method according to claim 1 wherein the nonwoven fabric comprises a spunbond web.

20. A nonwoven fabric comprising fibers which comprise polyethylene, the nonwoven fabric having a chemical agent applied thereon and having a Frazier air permeability of at least 5 $m^3/min/m^2$ and characterized by less than 1.2 stretch-type defects/m^2.

21. The nonwoven fabric according to claim 20 wherein the fabric is characterized by less than 0.6 stretch-type defect/m^2.

22. The nonwoven fabric according to claim 21 wherein the polyethylene polymer comprises linear low density polyethylene.

23. The nonwoven fabric according to claim 22 wherein the fibers are bicomponent fibers.

24. The nonwoven fabric according to claim 23 wherein the bicomponent fibers further comprise polyester.

25. The nonwoven fabric according to claim 24 wherein the bicomponent fibers are arranged in a sheath-core configuration, the sheath comprising linear low density polyethylene and the core comprising polyester.

26. The nonwoven fabric according to claim 20 wherein the chemical agent is a cured fluorochemical.

27. An apparatus for heat-treating a sheet material comprising:

a first heating zone;

a second heating zone; and

a tension isolation means disposed between the first and second heating means, wherein the tension isolation means applies tension to the sheet as it is conveyed through the first heating zone and causes a reduction in tension on the sheet as the sheet exits the tension isolation means and is conveyed through the second heating zone.

28. The apparatus according to claim 27 wherein the tension isolation means comprises serpentine rolls.

29. The apparatus according to claim 27 wherein the tension isolation means comprises a nip formed by two rolls.

30. The apparatus according to claim 27 wherein the first heating zone comprises an air-impingement dryer.

31. The apparatus according to claim 30 wherein the second heating zone comprises a source of heated air, a porous surface for supporting the sheet material and a vacuum source located below the porous surface for pulling the heated air through the sheet material and the porous surface to pin the sheet material to the porous surface.

32. The apparatus according to claim 31 wherein the second heating zone is a vacuum belt oven.

33. A method for heat treating a multiple component nonwoven fabric comprising a first polymeric component and a second polymeric component, the first polymeric component having a melting point or softening point that is lower than the melting point or softening point of the second polymeric component, comprising heating the nonwoven fabric to a temperature that is greater than about $(T_m - 40)°C$, where T_m is the melting or softening point of the first polymeric component, but less than $(T_m - 10)°C$, while the nonwoven fabric is under a tension in any one direction that is between 0 and 52.5 N/m.

34. The method according to claim 33 wherein the fabric is heated to a temperature that is greater than about $(T_m - 30)°C$.

35. The method according to claim 34 wherein the fabric is heated to a temperature that is less than $(T_m - 15)°C$.